

CLAIMS

1. A T1E1.4 compliant filter circuit used in telecommunication systems for interconnecting between incoming telephone lines and a subscriber's telephone termination equipment located at a subscriber's premises for blocking DSL signals so as to prevent interference problems between DSL devices and the subscriber's termination equipment, said compliant filter circuit comprising:

first and second inductors connected in series between a first input terminal and a first output terminal;

said first inductor having its one end connected to said first input terminal and its other end connected to one end of said second inductor at a first common point, said second inductor having its other end connected to said first output terminal;

third and fourth inductors connected in series between a second input terminal and a second output terminal;

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25 said third inductor having its one end
connected to said second input terminal and
its other end connected to one end of said
fourth inductor at a second common point, said
fourth inductor having its other end connected
to said second output terminal;

30 a first capacitor having its one end
connected to said first common point and its
other end connected to said second common
point;

35 a second capacitor having its one end connected
to said first common point and its other end
connected to said first output
terminal; and

a third capacitor having its one end connected to
said second common point and its other end connected
to said second output terminal.

2. A T1E1.4 compliant filter circuit as claimed in
Claim 1, wherein said first and third inductors have
values on the order of 4.7 mH.

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3. A T1E1.4 compliant filter circuit as claimed in Claim 2, wherein said second and fourth inductors have values on the order of 4.3 mH.

4. A T1E1.4 compliant filter circuit as claimed in Claim 3, wherein said first capacitor has a value on the order of 10 nF.

5. A T1E1.4 compliant filter circuit as claimed in Claim 4, wherein said second and third capacitors have values on the order of 10 nF.

6. A T1E1.4 compliant filter circuit as claimed in Claim 1, wherein said first inductor, second inductor and first capacitor function as a second-order low-pass filter section so as to block the DSL data signals from said termination equipment.

7. A T1E1.4 compliant filter circuit as claimed in Claim 6, wherein said second inductor, fourth inductor, second capacitor and third capacitor function as an

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elliptical filter section so as to block the DSL data
5 signals in a frequency band of 25-35 KHz.

8. A T1E1.4 compliant filter circuit as claimed in
Claim 1, wherein said first through fourth inductors and
said first through third capacitors are housed in a
modular type design.

9. A T1E1.4 compliant filter circuit as claimed in
Claim 8, wherein said modular design is capable of self-
installation by a subscriber.

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5 10. A T1E1.4 compliant filter circuit used in
telecommunication systems for interconnecting between
incoming telephone lines and a subscriber's telephone
termination equipment located at a subscriber's premises
for blocking DSL signals so as to prevent interference
problems between DSL devices and the subscriber's
10 termination equipment, said compliant filter circuit
comprising:

a low-pass filter section formed of first
and second inductors and a first capacitor;

15 said first inductor having a first end
connected to a first input terminal and a
second end;

said second inductor having a first end
connected to a second input terminal and a
second end;

20 said first capacitor having a first end
connected to said second end of said first
inductor and having a second end connected to
said second end of said second inductor;

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an elliptical filter section formed of
25 third and fourth inductors and second and
third capacitors;

said third inductor and said second
capacitor being connected in parallel and
having their one end joined also to said
30 second end of said first inductor and their
other end joined to a first output terminal;
and

said fourth inductor and said third
capacitor being connected in parallel and
35 having their one end joined also to said
second end of said second inductor and their
other end joined to a second output terminal.

11. A T1E1.4 compliant filter circuit as claimed in
Claim 10, wherein said first and second inductors have
values on the order of 4.7 mH.

12. A T1E1.4 compliant filter circuit as claimed in
Claim 11, wherein said third and fourth inductors have
values on the order of 4.3 mH.

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13. A T1E1.4 compliant filter circuit as claimed in Claim 12, wherein said first capacitor has a value on the order of 10 nF.

14. A T1E1.4 compliant filter circuit as claimed in Claim 13, wherein said second and third capacitors have values on the order of 10 nF.

15. A T1E1.4 compliant filter circuit as claimed in Claim 10, wherein said first through fourth inductors and said first through third capacitors are housed in a modular type design.

16. A T1E1.4 compliant filter circuit as claimed in Claim 15, wherein said modular design is capable of self-installation by a subscriber.

17. A T1E1.4 compliant filter circuit as claimed in Claim 8, wherein said modular type design includes a first modular input line jack for connection to the incoming telephone lines and a second modular output

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telephone jack for connection to the subscriber's termination equipment.

10 18. A T1E1.4 compliant filter circuit as claimed in Claim 17, wherein said modular type design further includes a third modular output DSL pass-through jack for connection to the DSL devices.

15 19. A T1E1.4 compliant filter circuit as claimed in Claim 15, wherein said modular type design includes a first modular input line jack for connection to the incoming telephone lines and a second modular output telephone jack for connection to the subscriber's termination equipment.

20 20. A T1E1.4 compliant filter circuit as claimed in Claim 19, wherein said modular type design further includes a third modular output DSL pass-through jack for connection to the DSL devices.

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